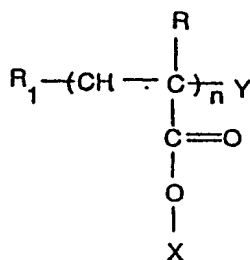


IN THE CLAIMS:

Claim 1 (currently amended) ~~Functional~~ A functional polyvalent oligomer having formula (1)<sup>2</sup>

Formula (1)



**Formula (1)**

wherein R is H, CH<sub>3</sub>, or C<sub>2</sub>H<sub>5</sub>, ~~R<sub>1</sub>~~, R<sub>1</sub> is H, ~~NH<sub>2</sub> NH<sub>2</sub>~~, OH, or COOH, X is *N-Acetyl*

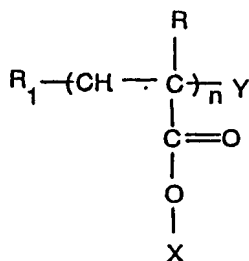
Glucosamine, ~~mannose, galactose and sialic acid, fructose, ribulose, erythrose, xylulose,~~

~~psicose, sorbose, tagatose, glucopyranose, fructofuranose, deoxyribose, galactosamine,~~

~~sucrose, lactose, isomaltose, maltose, cellobiose, cellulose and amylose,~~ Y is H, COOH, OH

or ~~NH<sub>2</sub> NH<sub>2</sub>~~, and n is from 3 to 50.

Claim 2 (currently amended) A process for the preparation of the functional polyvalent oligomer of the Formula (1)

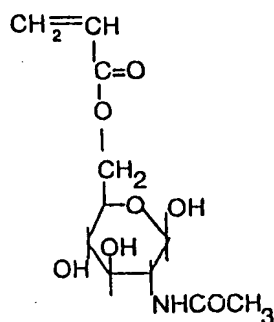


Formula (1)

wherein R is H, CH<sub>3</sub>, or C<sub>2</sub>H<sub>5</sub>, R<sub>1</sub>, R<sub>1</sub> is H, NH<sub>2</sub> NH<sub>2</sub>, OH, or COOH, X is *N-Acetyl* Glucosamine, ~~mannose, galactose and sialic acid, fructose, ribulose, erythrose, xylulose, psicose, sorbose, tagatose, glucopyranose, fructofuranose, deoxyribose, galactosamine, sucrose, lactose, isomaltose, maltose, cellobiose, cellulose and amylose~~, Y is H, COOH, OH or NH<sub>2</sub> NH<sub>2</sub>, and n is from 3 to 50; which comprises dissolving a monomeric NAG monomer in a solvent and adding a chain terminating transfer agent to obtain a solution with molecules of different molecular weights, adding an initiator and accelerator to the solution, allowing ~~the a~~ reaction for a period of 24 hrs to 48 hrs to form a reaction mixture, bringing the temperature of the reaction mixture to 50 to 60°C, precipitating a he product from the reaction mixture using a non solvent, vacuum drying the product for ~~48 hrs~~, a time sufficient to obtain said functional polyvalent oligomer.

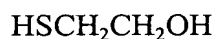
Claim 3 (currently amended) A process as claimed in claim 2, wherein the monomer ~~used~~ is NAG, ~~is~~ Acryloyl NAG or Methacryloyl NAG.

Claim 4 (currently amended) A process as claimed in claim 3, wherein said monomer is Acryloyl NAG having the formula 2



Formula (2).

Claim 5 (currently amended) A process as claimed in claims 4, wherein said chain ~~transfer~~ transfer agent is a mercapto ethanol having the formula 3:



Formula 3.

Claim 6 (currently amended) A process as claimed in claim 2, wherein the solvent used to dissolve the ~~monomeric ligand~~ monomer is selected from the group consisting of water, methanol, ethanol dimethyl formamide, tetra hydro furon or dimethyl sulfoide.

Claim 7 (currently amended) A process as claimed in claim 2, wherein the chain transfer agent is selected from the group consisting of Mercapto Ethanol, Mercapto Propionic Acid, Mercapto Amine, and Mercapto Propanol.

Claim 8 (currently amended) A process as claimed in claim 2, wherein said initiator is selected

from the group consisting of ammonium per sulphate (APS), potassium per sulphate (KPS), ~~or~~ azo bis iso butyro nitrile (AffiN), 4,4 azobis (4-cyanopentanol), 4,4 azobis (4-cyanovaleric acid), ~~or~~ and 3,3 azobis (3-cyanovaleric acid).

Claim 9 (currently amended) A process as claimed in claim 2, wherein said accelerator is ~~selected from~~ N,N', N'' tetramethyl ethylene diamine (TEMED).

Claim 10 (cancelled)

Claim 11 (currently amended) A process as claimed in claim 2, wherein said non solvent is ~~selected from~~ acetone, diethyl ether or hexane.

Claim 12 (currently amended) A process as claimed in claim 2, wherein the molecular weight of said ~~oligomeris~~ polyvalent oligomer is in a range from 400 Daltons to 4000 Daltons.

Claim 13 (currently amended) A process as claimed in claim 2, wherein the molar ratio of chain ~~terminating transfer~~ agent to monomer ~~NAG~~ for the synthesis of the functional polyvalent oligomer polymer is in the range of from 0.5:25 to 1:0.5, ~~preferably 1 to 25 to 1:20.~~

Claim 14 (new) A process as claimed in claim 2, wherein the molar ratio of chain transfer agent to monomer for the synthesis of the functional polyvalent oligomer is in the range of from 1 to 25 to 1:20.